

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A cascaded voltage controlled oscillator comprising:

a first oscillator stage having a first oscillator stage first input, a first oscillator stage second input and a first oscillator stage output;

a second oscillator stage having a second oscillator stage input and a second oscillator stage output wherein the first oscillator stage output is input to the second oscillator stage input and wherein the second oscillator stage output is fed back to the first oscillator stage second input;

a third oscillator stage having a third oscillator stage input and a third oscillator stage output wherein the second oscillator stage output is fed to the third oscillator stage input; and

a fourth oscillator stage having a fourth oscillator stage input and a fourth oscillator output;

wherein :

the oscillator stages are LC tank oscillators -;

the third oscillator stage output is fed to the fourth oscillator stage input;

the first oscillator stage first input includes a first oscillator stage first positive input and a first oscillator stage first negative input;

the fourth oscillator stage output includes a fourth oscillator stage positive output and a fourth oscillator stage negative output; and

the fourth oscillator stage positive output is fed to the first oscillator stage first negative input and the fourth oscillator stage negative output is fed to the first oscillator stage first positive input.

7. (Currently Amended) A cascaded voltage controlled oscillator comprising:

a first oscillator stage having a first oscillator stage first input, a first oscillator stage second input and a first oscillator stage output;

a second oscillator stage having a second oscillator stage input and a second oscillator stage output wherein the first oscillator stage output is input to the second oscillator stage input and wherein the second oscillator stage output is fed back to the first oscillator stage second input;

a third oscillator stage having a third oscillator stage input and a third oscillator stage output wherein the second oscillator stage output is fed to the third oscillator stage input;

wherein the phase relationship of signals being fed to the first oscillator stage first input and the first oscillator stage second input is such that the total input to the first oscillator stage is enhanced and the phase difference between the signal being fed to the first oscillator stage first input and the first oscillator stage second input is approximately 45° .

8. (Previously Presented) A cascaded voltage controlled oscillator as recited in claim 7 wherein the oscillator stages are LC tank oscillators.

9. (Previously Presented) A cascaded voltage controlled oscillator as recited in claim 7 wherein there are four oscillator stages.

10. (Previously Presented) A cascaded voltage controlled oscillator as recited in claim 7 wherein the oscillator stages are single ended.

11. – 12. (Cancelled)